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10/775,824	02/09/2004	Andy Leung	SMC1P021/635570	8178

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BEYER WEAVER LLP  
P.O. BOX 70250  
OAKLAND, CA 94612-0250

EXAMINER
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NGUYEN, LE V

ART UNIT	PAPER NUMBER
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2174

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/775,824

Applicant(s)

LEUNG ET AL.

Examiner

Le Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 33-47, 56-60 and 62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-32, 48-55 and 61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Upon initial review of the claims it appears that claims 1-62 differ in subject matter and therefore require a different search. In accordance with this a restriction is deemed proper.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-13, 44-47 and 60, drawn to a method of ordering visual objects on a display, classified in class 715, subclass 766.

II. Claims 14-32, 48-55 and 61, drawn to a method of creating a connecting link between source and destination visual objects, classified in class 715, subclass 762.

III. Claims 33-43, 56-59 and 62, drawn to a method of creating a non-line shape connecting link between visual objects, classified in class 715, subclass 763.

3. Inventions Groups I and II-III are directed to related processes. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed do not overlap in scope with either Groups II or III. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Inventions Groups II and II are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as

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claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination does not require the particulars of the subcombination, i.e. the combination does not require that the connecting link be represented by at least one non-line shape as required in the subcombination. The subcombination has separate utility such as in a process in which connecting paths are permanently set and cannot be clipped.

4. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper. During a telephone conversation with Mr. John Scotts on 2/2/07 a provisional election was made with traverse to prosecute the invention of Group II, claims 14-32, 48-55 and 61. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-13, 33-47, 56-60 and 62 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

***Drawings***

6. Figures 13a, 13b and 15b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14-19, 48-53 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gay et al. ("Gay") in view of Harrington.

As per claim 14, although Gay teaches a method of creating a connecting link between source and destination visual objects comprising determining a region within each visual object to be joined and a connecting path extending between the regions

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(fig. 6), the connecting path terminates at the locations where the connecting path intersects the source and destination visual objects and extending a connecting link between the source and destination visual objects terminating at the locations (fig. 6; *displayed is a connecting link between a source such as 78 and destination visual objects such as 76, the connecting link terminates at the locations where the connecting path intersects 78 and where the connecting path intersects 76*), Gay does not explicitly disclose clipping. Harrington teaches clipping (col. 1, lines 22-56). It would have been obvious to an artisan at the time of the invention to incorporate the method of Harrington with the method of Gay in order to present to the user only that portion which is of interest.

As per claim 15, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the region is a point within each visual object (Gay: fig. 6).

As per claim 16, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the point is the center of each visual object (Gay: fig. 6; col. 4, lines 53-60; *wherein fig. 6 has the constraint relationships set forth in fig. 4A*).

As per claim 17, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a self-loop and wherein during the clipping, the self-loop is traversed in clockwise and anti-clockwise directions to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56)

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As per claim 18, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a curved line and wherein during the clipping, the curved line is flattened and represented by a series of straight line segments, each straight line segment being traversed to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

As per claim 19, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a self-loop and wherein during the clipping, the self-loop is traversed in clockwise and anti-clockwise directions to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

Claims 48 and 61 are individually similar in scope to claim 14 and are therefore rejected under similar rationale.

Claim 49 is similar in scope to claim 15 and is therefore rejected under similar rationale.

Claim 50 is similar in scope to claim 16 and is therefore rejected under similar rationale.

Claim 51 is similar in scope to claim 17 and is therefore rejected under similar rationale.

Claim 52 is similar in scope to claim 18 and is therefore rejected under similar rationale.

Claim 53 is similar in scope to claim 19 and is therefore rejected under similar rationale.

9. Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gay et al. ("Gay") in view of Harrington as applied to claim 17, and further in view of Hansen et al. ("Hansen").

As per claim 20, although the modified Gay teaches a method of creating a connecting link between source and destination visual objects (Gay: fig. 6), the modified Gay does not explicitly disclose placing an arrowhead on at least one end of the connecting link, the arrowhead having a tip terminating at the location, the connecting link terminating at a backend of the arrowhead. Hansen teaches a method of creating a connecting link between source and destination visual objects comprising placing an arrowhead on at least one end of the connecting link, the arrowhead having a tip terminating at the location, the connecting link terminating at a backend of the arrowhead (fig. 4; col. 8, lines 9-15). It would have been obvious to an artisan at the time of the invention to incorporate the method of Hansen with the method of the modified Gay in order to indicate a transition direction.

As per claim 21, the modified Gay teaches a method of creating a connecting link between source and destination visual objects comprising placing an arrowhead at each end of the connecting link (Hansen: fig. 4; col. 8, lines 9-15).

As per claim 22, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a straight line and wherein during the clipping, the straight line is traversed to determine the



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locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

As per claim 23, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a curved line and wherein during the clipping, the curved line is flattened and represented by a series of straight line segments, each straight line segment being traversed to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

As per claim 24, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a self-loop and wherein during the clipping, the self-loop is traversed in clockwise and anti-clockwise directions to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

10. Claims 25-27, 29-32, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gay et al. ("Gay") in view of Harrington as applied to claims 17 and 50, and further in view of Schuster et al. ("Schuster").

As per claim 25, although the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting link is represented by a line (Gay: fig. 6), the modified Gay does not explicitly disclose the connecting link being represented by a plurality of spaced shapes. Schuster teaches a connecting link is represented by a plurality of spaced shapes (Abstract; figs. 9A-10B). It would have been obvious to an artisan at the time of the invention to incorporate the

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method of Schuster with the method of the modified Gay so that shapes can be produced with only a minimal amount of user time.

As per claim 26, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the shapes are generally evenly spaced along the length of the connecting path (Schuster: Abstract; figs. 9A-10B).

As per claim 27, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the shapes along the connecting path are the same (Schuster: figs. 9A-10B).

As per claim 29, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the shapes provide semantic meaning to the connecting link joining the visual objects (Gay: col. 6, lines 25-32).

As per claim 30, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a straight line and wherein during the clipping, the straight line is traversed to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

As per claim 31, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a curved line and wherein during the clipping, the curved line is flattened and represented by a series of straight line segments, each straight line segment being traversed to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

As per claim 32, the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the connecting path is a self-loop and wherein during the clipping, the self-loop is traversed in clockwise and anti-clockwise directions to determine the locations where the connecting path intersects the source and destination visual objects (Harrington: col. 1, lines 40-56).

Claim 54 is similar in scope to claim 25 and is therefore rejected under similar rationale.

Claim 55 is similar in scope to claim 26 and is therefore rejected under similar rationale.

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gay et al. ("Gay") in view of Harrington and Schuster et al. ("Schuster") as applied to claim 26, and further in view of Hansen et al. ("Hansen").

As per claim 28, although the modified Gay teaches a method of creating a connecting link between source and destination visual objects wherein the shapes along the connecting path are the same (Schuster: figs. 9A-10B), the modified Gay does not explicitly disclose the shapes along the connecting path to be different. Hansen teaches a method of creating a connecting link between source and destination visual object wherein shapes along the connecting path are different (fig. 4; col. 8, lines 9-15). It would have been obvious to an artisan at the time of the invention to incorporate the method of Hansen with the method of the modified Gay in order to provide users with an implementation preference.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sengupta et al. (US 6,442,512 B1) teach an interactive process modeling system.

Szabo (US 5,966,126 A1) teaches a GUI for database system.

Campanelli et al. (US 5,666,503) teach a SI image editor and method for editing structured images.

Kodosky et al. (US 2003/0184580 A1) teach creating and using configuration diagrams, which graphically displays program relationships.

Phillips (US 6,425,121 B1) teaches a method and apparatus for resolving divergent paths within data flow diagrams in graphical programming environments, the data flow diagrams formed by interconnecting symbolic representations of program objects.

Fernandes et al. (US 5,555,357) teach a computer system and method for generating and manipulating charts and diagrams.

Bush, Jr. (US 6,486,899 B1) teaches a system and method for displaying logistics information associated with a supply chain.

Kenney et al. (US 6,121,965) teach a UI for graphical application tool.

Kirkland (US 5,986,669) teaches graphics processing with efficient clipping.


***Inquires***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lê Nguyen whose telephone number is (571) 272-4068. The examiner can normally be reached on Monday - Friday from 7:00 am to 3:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached at (571) 272-4063.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lvn  
Patent Examiner  
February 9, 2007

  
SY LUU  
PRIMARY EXAMINER